

Mineral Industry Surveys

For information, contact:

Lisa A. Corathers, Silicon Commodity Specialist
U.S. Geological Survey
989 National Center
Reston, VA 20192
Telephone: (703) 648-4973, Fax: (703) 648-7757
E-mail: lcorathers@usgs.gov

Lisa D. Miller (Data)
Telephone: (703) 648-7973
Fax: (703) 648-7975
E-mail: millerl@usgs.gov

Internet: <http://minerals.usgs.gov/minerals>

SILICON IN JANUARY 2004

In January 2004, preliminary data indicate that domestic production of silicon ferroalloys plus metal, excluding silvery pig iron, increased by 16% compared with that of the previous month, according to the U.S. Geological Survey. Domestic shipments of silicon ferroalloys plus metal increased by 22% while producer stocks of these materials decreased by 2% compared with those for December 2003. All domestic data for ferrosilicon have been combined to avoid disclosing company proprietary data.

The ensuing discussion is based on a comparison of the December 2003 trade data, which are included in this report, to those of November 2003, on a gross weight basis. Ferrosilicon exports decreased by 30%, owing to significant decreases in both trade categories. Silicon metal exports were triple, owing primarily to a significant increase in the "silicon metal, other" trade category. Ferrosilicon imports more than doubled, and silicon metal imports increased by 85%. The increase in ferrosilicon imports was due primarily to a significant increase in the trade category "ferrosilicon, 55% - 80% silicon, other." The increase in silicon metal imports occurred across all trade categories.

On a gross weight basis, ferrosilicon exports and silicon metal imports decreased in 2003 compared to those of 2002, while

ferrosilicon imports and silicon metal exports increased. Ferrosilicon exports fell by 9% from 12,700 t to 11,600 t. Silicon metal exports rose by 32% from 15,200 t to 20,100 t. Ferrosilicon imports increased by 30% from 207,000 t to 270,000 t, and silicon metal imports decreased by 12% from 146,000 t to 128,000 t.

Update

On March 1, 2004, the International Trade Administration of the U.S. Department of Commerce gave notice of the opportunity to request an administrative review of the antidumping duty order on silicon metal imports from Russia covering the period June 22, 2002, through February 29, 2004 (International Trade Administration, 2004).

Reference Cited

International Trade Administration, 2004, Antidumping or countervailing duty order, finding, or suspended investigation—Opportunity to request administrative review: Federal Register, v. 69, no. 40, March 1, p. 9584-9585.

Prices, cents per pound, silicon content

	<u>50% Ferrosilicon¹</u>	<u>75% Ferrosilicon²</u>	<u>Silicon Metal²</u>
December 30	46.0-49.0	44.00-46.00	65.0-67.0
January 8	46.0-49.0	44.00-46.00	66.0-67.5
January 15	46.0-49.0	45.75-46.75	66.0-67.5
January 22	47.0-50.0	45.75-46.75	66.0-67.5
January 29	50.0-52.0	46.00-47.00	67.0-70.0

¹Source: Ryan's Notes, North American transaction price.

²Source: Platts Metals Week, dealer import price.

TABLE 1
U.S. PRODUCTION, SHIPMENTS, AND PRODUCER STOCKS OF SILICON ALLOYS AND METAL IN 2004^{1,2}

(Metric tons)

Material	Gross production ⁴		Net shipments		Stocks, January 31
	January	Year to date ⁵	January	Year to date ⁵	
Ferrosilicon:					
All grades ^{6,7}	14,800	14,800	10,800	10,800	21,800
Silicon metal:					
Excludes semiconductor grades	10,800	10,800	9,640	9,640	5,110

¹Data are rounded to no more than three significant digits.

²Includes U.S. Geological Survey estimates.

³Data for silvery pig iron (less than 25% silicon) withheld to avoid disclosing company proprietary data.

⁴Includes in-plant consumption, as in production of magnesium ferrosilicon and other miscellaneous alloys.

⁶Ferrosilicon categories were aggregated to avoid disclosing company proprietary data.

⁷Includes miscellaneous silicon alloys.

TABLE 2
U.S. EXPORTS OF FERROSILICON AND SILICON METAL IN DECEMBER 2003^{1,2}

(Metric tons, unless otherwise specified)

Country	Gross weight	Contained weight	Value	Year to date		
				Gross weight	Contained weight	Value
Ferrosilicon:						
More than 55% silicon:						
Canada	268	161	\$229,000	4,470	2,680	\$3,640,000
Colombia	4	3	5,130	4	3	5,130
Malaysia	--	--	--	33	25	54,800
Mexico	141	84	115,000	1,310	792	1,360,000
Total	412	248	350,000	5,810	3,500	5,070,000
Other ferrosilicon:						
Australia	--	--	--	24	12	29,300
Brazil	17	8	15,500	116	53	143,000
Canada	325	162	330,000	3,400	1,700	2,990,000
France	--	--	--	18	9	15,000
Germany	--	--	--	9	3	11,700
Italy	16	9	26,300	65	34	105,000
Korea, Republic of	34	17	42,800	656	328	701,000
Malaysia	--	--	--	20	10	22,800
Mexico	98	49	86,200	1,390	687	1,280,000
Spain	--	--	--	13	6	11,900
Other (8 countries)	10	4	10,100	63	18	62,100
Total	499	250	511,000	5,780	2,860	5,370,000
Total ferrosilicon	911	498	861,000	11,600	6,370	10,400,000

See footnotes at end of table.

TABLE 2--Continued
U.S. EXPORTS OF FERROSILICON AND SILICON METAL IN DECEMBER 2003^{1,2}

(Metric tons, unless otherwise specified)

Country	Gross weight	Contained weight	Value	Year to date		
				Gross weight	Contained weight	Value
Metal:						
More than 99.99% silicon:						
China	124	XX	\$3,160,000	942	XX	\$26,500,000
France	13	XX	284,000	146	XX	3,540,000
Germany	88	XX	2,480,000	650	XX	20,300,000
Japan	516	XX	21,100,000	4,370	XX	186,000,000
Korea, Republic of	32	XX	1,700,000	597	XX	25,000,000
Malaysia	12	XX	1,820,000	80	XX	13,300,000
Norway	--	XX	--	560	XX	14,200,000
Taiwan	36	XX	1,160,000	196	XX	7,110,000
Ukraine	14	XX	382,000	93 ³	XX	2,520,000
United Kingdom	41	XX	2,170,000	219	XX	20,700,000
Other (43 countries)	29	XX	1,970,000	436	XX	28,200,000
Total	903	903 ^e	36,300,000	8,290	8,290 ^e	347,000,000
99.00% - 99.99% silicon:						
Brazil	37	37	96,600	673	667	1,680,000
Colombia	1	1	4,580	104	103	150,000
France	--	--	--	78	78	110,000
Italy	--	--	--	398	394	702,000
Jamaica	--	--	--	9	9	15,300
Japan	6	6	8,540	21	20	48,200
Mexico	27	26	45,400	272	269	438,000
Norway	--	--	--	530	525	894,000
Singapore	--	--	--	7	7	9,020
Venezuela	--	--	--	49	49	74,100
Other (18 countries)	26	26	42,100	112	111	205,000
Total	97	97	197,000	2,250	2,230	4,330,000
Other silicon:						
Canada	43	41	55,100	2,370	2,300	2,620,000
China	165	160	218,000	212	206	280,000
Hong Kong	8	7	10,100	149	144	408,000
Italy	--	--	--	139	135	245,000
Japan	179	174	266,000	1,610	1,560	2,460,000
Korea, Republic of	--	--	--	189	184	260,000
Mexico	103	100	177,000	820	796	1,820,000
Netherlands	31	30	319,000	789	759	4,190,000
Norway	2,560	2,480	3,370,000	2,560	2,480	3,370,000
United Kingdom	3	3	20,000	473	459	566,000
Other (18 countries)	24	23	96,900	297	289	586,000
Total	3,110	3,020	4,530,000	9,600	9,320	16,800,000
Total silicon metal	4,110	4,020	41,000,000	20,100	19,800	368,000,000

^eEstimated. XX Not applicable. -- Zero.

¹Presentation of monthly data is based on the year-to-date quantities (gross weight) of the top 10 countries.

²Data are rounded to no more than three significant digits; may not add to totals shown.

³All or part of these data have been referred to the U.S. Census Bureau for verification.

Source: U.S. Census Bureau.

TABLE 3
U.S. IMPORTS FOR CONSUMPTION OF FERROSILICON AND SILICON METAL IN DECEMBER 2003^{1,2}

(Metric tons, unless otherwise specified)

Country	Gross weight	Contained weight	Value	Year to date		
				Gross weight	Contained weight	Value
Ferrosilicon:						
55% - 80% silicon, over 3% Ca:						
Argentina	--	--	--	680	341	\$657,000
Brazil	--	--	--	1,100	817	814,000
Canada	--	--	--	41	30	16,400
China	--	--	--	19	3	14,200
France	18	11	\$24,200	180	107	242,000
Germany	--	--	--	6	4	6,000
Mexico	--	--	--	15	10	55,400
Total	18	11	24,200	2,040	1,310	1,800,000
55% - 80% silicon, Other:						
Brazil	20	15	9,750	6,050	4,620	3,590,000
Canada	960	721	690,000	14,500	10,900	9,860,000
China	11,600	8,770	6,880,000	52,100	39,200	30,000,000
France	147	99	270,000	4,040	2,560	7,720,000
Iceland	4,300	3,230	2,640,000	20,400	15,300	12,400,000
Kazakhstan	3,500	2,640	2,400,000	31,700	24,200	22,300,000
Norway	558	412	710,000	11,600	8,620	10,100,000
Russia	4,360	3,270	2,720,000	28,800	19,900	16,500,000
Ukraine	--	--	--	6,260	4,720	3,670,000
Venezuela	5,990	4,620	4,000,000	42,900	34,400 ³	29,200,000
Other (10 countries)	91	66	254,000	6,340	4,740	5,570,000
Total	31,500	23,800	20,600,000	225,000	169,000	151,000,000
80% - 90% silicon:						
Canada	19	15	9,940	57	46	26,700
South Africa	--	--	--	9	7	3,350
Total	19	15	9,940	66	53	30,100
Magnesium ferrosilicon:						
Argentina	282	130	221,000	2,770	1,280	1,970,000
Brazil	550	249	403,000	4,470	2,010	2,740,000
Canada	34	17	33,900	2,540	1,220	1,930,000
China	50	22	39,800	6,120	2,760	4,170,000
France	--	--	--	100	35	113,000
India	--	--	--	114	58	116,000
Japan	35	14	10,800	455	206	503,000
Netherlands	54	25	44,800	968	451	785,000
Norway	1,180	534	968,000	12,600	5,800	10,200,000
Sweden	--	--	--	104	53	98,800
Other (3 countries)	14	8	28,900	48	25	106,000
Total	2,200	1,000	1,750,000	30,300	13,900	22,700,000
Other ferrosilicon:						
Argentina	--	--	--	59	27	54,700
Brazil	63	42	77,700	787	363	583,000
Canada	653	170	474,000	8,510	2,800	5,340,000
China	--	--	--	83	37	85,000
France	--	--	--	34	18	75,000
Russia	--	--	--	2,700	1,670	1,420,000
Ukraine	--	--	--	11	5	7,030
Total	716	212	552,000	12,200	4,910	7,570,000
Total ferrosilicon	34,500	25,100	22,900,000	269,000	189,000	183,000,000

See footnotes at end of table.

TABLE 3--Continued
U.S. IMPORTS FOR CONSUMPTION OF FERROSILICON AND SILICON METAL IN DECEMBER 2003^{1,2}

(Metric tons, unless otherwise specified)

Country	Gross weight	Contained weight	Value	Year to date		
				Gross weight	Contained weight	Value
Metal:						
More than 99.99% silicon:						
Belgium	--	XX	--	12	XX	\$48,000
China	(4)	XX	\$14,200	37	XX	512,000
Finland	--	XX	--	9	XX	29,100
Germany	34	XX	4,550,000	324	XX	40,600,000
India	--	XX	--	14	XX	18,900
Italy	20	XX	1,110,000	340	XX	15,200,000
Japan	12	XX	807,000	467	XX	14,300,000
Korea, Republic of	46	XX	146,000	160	XX	981,000
Poland	--	XX	--	9	XX	34,600
Spain	1	XX	6,120	8	XX	43,600
Other (10 countries)	(4)	XX	44,600	17	XX	1,020,000
Total	113	113 ^e	6,680,000	1,400	1,400 ^e	72,900,000
99.00% - 99.99% silicon:						
Argentina	--	--	--	754	750	714,000
Australia	243	241	268,000	4,360	4,090 ³	4,670,000
Brazil	2,730	2,710	3,070,000	49,100	48,800	57,500,000
Canada	395	392	475,000	14,900	14,800	17,700,000
China	--	--	--	269	263	240,000
Kazakhstan	--	--	--	520	515	517,000
Korea, Republic of	--	--	--	120	119	96,000
Malaysia	--	--	--	300	297	309,000
Norway	502	499	990,000	5,940	5,790	10,700,000
South Africa	2,750	2,730	3,080,000	28,400	28,200	32,300,000
Other (10 countries)	72	66	210,000	1,270	1,230	2,370,000
Total	6,690	6,640	8,090,000	106,000	105,000	127,000,000
Other silicon:						
Brazil	--	--	--	1,910	1,890	1,930,000
Canada	--	--	--	2,550	2,420	2,650,000
China	110	108	94,200	2,550	2,510	2,260,000
Germany	37	20	38,200	320	297	319,000
Kazakhstan	--	--	--	240	233	190,000
Norway	--	--	--	1,110	1,100	1,160,000
South Africa	1,650	1,630	1,560,000	9,270	9,100	8,850,000
Ukraine	--	--	--	680	669	638,000
United Arab Emirates	--	--	--	319	314	264,000
United Kingdom	18	18	29,900	580	565	636,000
Other (10 countries)	56	41	54,800	850	612	911,000
Total	1,880	1,810	1,770,000	20,400	19,700	19,800,000
Total silicon metal	8,680	8,560	16,500,000	128,000	126,000	220,000,000

^eEstimated. XX Not applicable. -- Zero.

¹Presentation of monthly data is based on the year-to-date quantities (gross weight) of the top 10 countries.

²Data are rounded to no more than three significant digits; may not add to totals shown.

³All or part of these data have been referred to the U.S. Census Bureau for verification.

⁴Less than 1/2 unit.

Source: U.S. Census Bureau.